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our whole country, and nothing
but our country."

—Daniel Webster.

BULLETIN

of the
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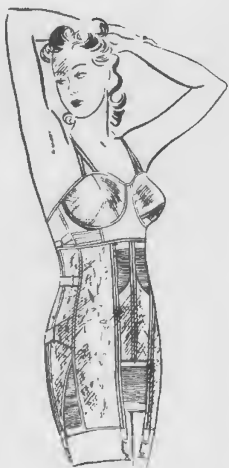
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PRESIDENT'S PAGE

Voluntary Enlistment versus Coercion

There is a great deal of thunder being manifested regarding this point emphasized in the title above. I think it is timely to analyze this attitude. Personally, I do not believe there is any difference in the feeling of patriotism among the profession in this war than in the last war. But frankly there is infinitely more confusion than from any information I can gather from those who so willingly offered their services before. If you remember, the younger professional men were advised to wait until the blanks for Procurement and Assignment were sent out. They waited and waited, it was months before these blanks were sent out. It would seem these blanks came in so rapidly the Washington office was "bottle necked" or "water logged" or whatever happens when things come too fast. Consequently, in order to furnish the needs of especially the Army, Recruiting Boards plus coercing telegrams must be used to expedite matters.

It has only been in the past month that the profession in Ohio knew their problem. The response has been very gratifying as the Ohio Procurement and Assignment will admit as recorded in this month's issue of the Ohio State Journal. The public thinks the only way the profession would enlist for the armed forces was to be coerced. This is dead wrong. They should be informed of the facts.

WALTER KING STEWART, M. D.

President.

BULLETIN of the Mahoning County Medical Society

AUGUST 1942

Editorial---

Our Society's Future

Just as it is with us individually, so is it with our Society. No man knows what lies ahead. From our membership have gone or presently will have gone one-fourth or more. The number will greatly exceed that—may reach one-third—before the year is out.

Gladly and proudly the Society gives these men to the nation's service. But in doing so we must be realistic about the loss of revenue caused thereby. We intend to keep our resources intact until the boys come home again. We, therefore, shall probably find it necessary to cut expenses wherever possible.

Programs may be more difficult to fill. Postgraduate days may cause more grief than we have been wont to experience. We must battle on with undaunted courage.

The *Bulletin*? What about it? We plan to carry on. As an aid to its greatest possible usefulness we want all our members everywhere in the service to receive it each month. To that end, Mrs. C. D. Hauser, president of the Women's Auxiliary, has promised to see that the mailing addresses of our men are kept up-to-date. We shall send the *Bulletin* first class—costing a little more—but what of it? Our men will look forward to this message from their Pals back home. Please help the Editors make it really good!

Action They Get

Last month, beginning with Mr. McNutt's Atlantic City speech, the Anvil Chorus made a raucous noise about the medics. Last month we said that the bedlam was the bunk. This

month the record reveals our statement as true. We didn't need this silly goading. These threats of coercion are shown to be both unnecessary and unkind.

Mighty few doctors want to go to war—exactly the same percentage in fact feel averse to that dirty business as is felt so among all other groups. But when necessity commands us, conscience and loyalty, as always, bring plenty of recruits.

We are proud of the lists presented this month of those ready to give their all for the safety of our Country. Be it recorded also that only a few contemptibles among doctors resist co-operation in this patriotic effort.

Relief Director Feuer

Every now and then a public official is found who combines in action both prudence and good faith. In his dealings with Medical and Dental problems, Relief Director Isadore L. Feuer is a shining example.

Director Feuer, from the very beginning of his service here, has accepted the principle that the Mahoning County Medical Society and the Corydon-Palmer Dental Society are agencies of great usefulness to him. He has consistently cooperated with us, and as a result of his administration of medical relief has brought praise from State Relief Examiner, C. W. Sullenberg.

It is good to find a man so fair and free from political pulling and hauling as Mr. Feuer. His experience has increased his faith in this co-operative agreement with us.

—C. B. N.



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August

MODERN MANAGEMENT OF EARLY SYPHILIS

BY LOREN W. SHAFFER, M. D.
Detroit, Michigan

I have selected the subject, "The Management of Early Syphilis" for discussion this evening for the reason that if syphilis is to be effectively controlled, the first requisite is the recognition of all early cases of syphilis through the full utilization of modern diagnostic methods and the adequate treatment of these infected individuals. I realize that from the medical standpoint, the management of late syphilis is a more frequent and a more complicated problem and therefore a more interesting subject for discussion to medical groups. However, if all cases of early syphilis could be found and adequate treatment administered, we would not need to face the problems of late syphilis, and for this reason too much emphasis cannot be placed on the management of such early cases.

It is rather discouraging that probably less than 25% of the cases of early syphilis that occur in any community ever receive a correct diagnosis. This, of course, is due to the fact that early manifestations of syphilis are so mild that they are frequently overlooked, or are not considered serious enough to cause the individual to report to a physician or clinic for diagnosis. Home remedies and the counter-prescribing druggist plus the fact that such lesions disappear spontaneously, form a loophole which urgently needs to be plugged through education and legal measures. It is equally discouraging, however, that of these early cases that are diagnosed, less than 25% receive adequate treatment. This again is due to the fact that a few treatments cause the disappearance of the clinical manifestations and the serology rapidly reverses, which gives the patient the impression (and unfortunately sometimes his physician) that he is cured. Our

whole syphilis control program can, therefore, be summed up in the statement that our problem is to find early cases and to hold them to adequate treatment, realizing that at the present time only 1 case in 16 is receiving a correct diagnosis and adequate treatment.

Numerous studies of cases of early syphilis managed both through private physicians and free clinics would indicate that 60% of the patients with early syphilis discontinue treatment before they have received 10 arsenical injections; that an additional 25% disappear before they have received 20 injections, the minimal amount considered necessary to even control infectiousness; that an additional 10% will receive from 10 to 30 injections and that only 5% of the cases will receive the 40 or more treatments which experience has taught us is necessary to secure the maximum percentage of cures. We also know that relapse with infectious and potentially infectious lesions will occur in 65% of cases that receive less than 4 injections of arsphenamine; in 15% of cases that receive less than 10 injections of arsphenamine; in 5% of cases that receive less than 20 injections of arsphenamine, whereas a relapse should occur in only 1.2% of cases that receive adequate treatment according to modern standards of at least 40 arsenical treatments. These figures show us very clearly where our problem lies in the control of syphilis and that we must meet through education, persuasion and even compulsion, the problem of holding early cases to adequate treatment.

The common weaknesses in the modern management of syphilis may well be summarized in the following chart:

Common Weaknesses in the Modern Treatment of Syphilis

1. A tendency to use the Wassermann test as a guide to treatment and an indication of "cure."
2. Failure to insist upon and secure a spinal fluid examination.
3. Undertreatment in early syphilis.
4. Failure to use consultation when in doubt.
5. Failure to thoroughly examine and classify types of syphilitic involvement.
6. Failure to perfect ourselves in the niceties of the technic of treatment.
7. Failure to adjust cost of treatment to the patient's financial means.

It is unfortunate that patients, and even more so that occasionally physicians, still use the serology as a guide to treatment. In general, in cases of early syphilis the blood serology reverses rapidly under treatment. Our experience has shown that treatment should be given continuously for at least a year after the serology reverses or that relapse can be expected.

Our second great weakness is our inability to sell even the profession upon the need of a spinal fluid examination in every patient who has syphilis and especially so in cases of early syphilis, at least before such patients are dismissed from treatment or even placed on a rest interval. With our present knowledge of syphilis it could be considered almost malpractice to dismiss such cases of early syphilis without at least urging a spinal fluid examination. If the patient refuses, then the potential future consequences as far as neurosyphilis is concerned would be on the patient's head.

The third weakness is the undertreatment of early syphilis. This is due largely to the fact that our

physicians still think in terms of serology and are guided as to indications for treatment on this basis.

The fourth weakness of failure to use consultation hardly requires any comment from me.

However, I must emphasize the fifth weakness which applies particularly to cases of late syphilis in which the physician is satisfied simply to treat a positive blood test. Cases of late syphilis must receive a careful physical examination to determine the type of clinical syphilis present, and treatment modified according to such classification—cardiovascular cases, hepatic cases, cases of neurosyphilis, eye cases, etc.—each require special forms of treatment indicated by the type of lesion present. The recognition of asymptomatic neurosyphilis at least can only be made through the spinal fluid examination which should be a part of the diagnostic procedure for such late cases. It is admitted that many patients with late syphilis will be discovered in the latent or asymptomatic state, but a diagnosis of latency should only be made after painstaking physical and spinal fluid examinations.

The sixth weakness of failure in perfecting ourselves in the niceties of the technic of treatment hardly requires comment. I am sure you appreciate that many patients discontinue their treatment from needless pain and reactions caused by a bungling technic.

Finally, I believe you will agree that the seventh weakness of failure to adjust the cost of treatment to the patient's financial means is today one of the main criticisms aimed at the medical profession in regard to their care of syphilis and is being made an entering wedge for the socialization of medicine starting with venereal disease. I realize that the men most qualified and most interested in this subject are more than willing to

meet the problems of cost which the prolonged, modern treatment makes necessary. However, there are still a few physicians who tend to bring a black eye on our profession by insisting on fees that patients of moderate means are not able to pay, and at the same time fail to refer these patients to other physicians or clinics where the financial problems will be given proper consideration.

The main essentials in the modern management of syphilis can well be covered in the following summary taken from Dr. John H. Stokes:

"Accept and put in practice in the management of early syphilis the fruits of the past decades' best controlled investigations. At least 30 or even 40 injections of an arsphenamine should be given in an early case whether in three courses of 10; four courses of 8, or one of 12 and three of 8. No complete rest interval should be permitted until at least a year after the last sign and symptom has disappeared, the patient being kept continuously on arsphenamine and bismuth. Treatment should be regulated arbitrarily according to this standard whether the infection was discovered while the Wasserman reaction was negative, by darkfield examination or later by the positive blood Wassermann reaction. One should never stop treatment or alter it materially within a year after the first negative blood Wassermann reaction. A complete spinal fluid examination should be made at the end of 6 months and at least within the first year. Every syphilitic woman should be treated through every pregnancy regardless of her serology. If we follow these rules, we are offering our patients in private practice the best that modern knowledge affords. We are on the modern firing line to extinguish the disease and nothing but a reduction of costs to a figure at which we as individuals can no longer remain in business can drive us from the field."

I also feel that the following "packaged" facts as stated so effectively by Dr. Stokes could well be repeated as a slogan summarizing some of our chief aims in today's management of syphilis:

Some Experiments in Sloganization of "Packaged" Facts

THEY KEEP THEIR TWIST AND CAN'T BE MISSED. The *Spirochaeta Pallida* lives for days with a simple kit technic. British chancres have been diagnosed in Canadian laboratories and vice versa. Delayed darkfields should be available through the State Health Department and utilized where local laboratory facilities for darkfield examinations do not exist.

DIAL 40-0-40-1½. Drop the rest period in early syphilis. Drop short courses. Drop Wassermann-bound treatment. Give 40 arsphenamine injections, 5 courses of 8 injections each; no rest for the first year; 40 bismuth injections, 1½ years. Continuous treatment and observation thereafter if uneventful.

NO REST WITHOUT A SPINAL TEST. The kick-back of refusal in neuro-recurrence, Tabes, Paresis, is shocking, needless.

TWENTY-FOUR AND SIXTY. Up to the fifth year of syphilis, dial 40-0-40-1½. After 5 years, give 24 arsenical injections and 60 heavy metal injections if the positive blood is the only sign.

FOUR IN TEN FOR THE LYIN' IN. It will yield almost 100% symptom-free babies to syphilitic mothers—4 grams of arsphenamine in 10 injections.

"PUNCTURE THE BACK IF THE BLOOD WON'T BACK TRACK." The first step in solving your fixed positive Wassermann riddle may lie behind the dura.

"STOP, LOOK, LISTEN." The slogan for late syphilis and the mis-

taken impulse to treat on the laboratory report.

Massive Arsenotherapy in Early Syphilis

The 5-day massive therapy for early syphilis has aroused great interest. If early (primary and secondary) syphilis can be cured in 5 days with intensive treatment, the control of syphilis will be revolutionized. This treatment, if further observation proves that it is both safe and effective, offers the greatest advance in the therapy of syphilis since Ehrlich's introduction of salvarsan. The two main problems in syphilis control, as previously stated, are the finding of early cases and the holding of these cases to adequate continuous treatment for 18 to 24 months. If treatment can be completed in 5 days, the almost insurmountable problem of holding such cases to adequate treatment will be solved.

The suggestion that very large doses of arsenicals might be given with safety in the treatment of syphilis was first made by Louis Chargin,¹ syphilologist to the Mount Sinai Hospital and the New York City Department of Health. It was based on the observations of Drs. Hirshfeld, Hyman and Wanger² showing that "speed shock" could be prevented by very slow intravenous administration (60-90 drops per minute). Such administration also permitted the introduction of remarkable large amounts of highly toxic substances with complete impunity.³ With the authorization of the trustees of the Mount Sinai Hospital, New York City, such work with the arsphenamines was begun on Dr. Baehr's service in 1933.¹

In the first series, 25 patients with early syphilis were treated by Drs. Chargin, Leifer and Hyman.⁴ Four to 4.5 grams of neorsphenamine were administered by continuous intravenous drip in 5 days; 87% of these

cases were cured as far as it is possible to determine, at the end of 5 years. No additional cases were treated until 1937, when this method of treatment was resumed under a committee including Drs. Rice, Rosenthal, Mahoney, Clarke, Palmer, DuBois and Baehr. Eighty-six cases of primary and secondary syphilis were treated with neorsphenamine by the method used in the first group. A report of these cases was made before the American Medical Association in 1939, by Drs. Hyman, Chargin, Rice and Leifer. Two-year cures were reported in 91% of these cases. The incidence of toxic reactions was high, especially with neuritis. The only treatment fatality in the two series (111 patients) was due to hemorrhagic encephalitis, and further use of neorsphenamine was discontinued in the fall of 1938. Arsenoxide (Mapharsen) was substituted.

When Mapharsen was first tried, there was no experience available with its use in larger dosage. The usual recommended dose is 1/10 of the dose of neorsphenamine. Since 4 to 4.5 gms. of neorsphenamine was used in the preceding series, a total dose of .4 gms. or 400 mgs. of Mapharsen was administered by intravenous drip similar to that used with neorsphenamine. It soon became obvious that the toxicity of Mapharsen was so slight that increased dosage could be safely employed. Because of failures with smaller doses, the dosage was increased to 700 mgs. and then by slow stages through levels of 800, 1000, 1100 and finally to the now recommended standard dosage of 1200 mgs.

Mapharsen is administered at the rate of 240 mgs. per day, daily for 5 days. It is given at the rate of 20 mgs. per hour dissolved in 200 c.c.'s of 5% glucose solution continued for 12 hours. This represents a total daily dose of 2400 c.c.'s of 5% glucose solution and 240 mgs. of Ma-

pharsen. This is truly heroic dosage since it represents a daily dose of 4 times the amount usually injected (60 mgs.) and a total of 20 standard doses in 5 days. The injection is given by slow drip at an approximate rate of 3 c.c.'s per minute from a gravity burette. A vein on the forearm below the cubital fossa is selected to permit movement of the arm.

Approximately 330 cases were treated with Mapharsen by the New York group. The most frequent reactions encountered are gastro-intestinal, and secondary fevers, occurring usually on the day after treatment is completed. Such febrile reactions are frequently associated with a toxic skin eruption of very temporary nature. No cases of exfoliative dermatitis were encountered. Likewise, no cases of blood dyscrasias, renal or marked liver damage were encountered. Neuritis, which occurred in 35% of the cases treated with neoarsphenamine and was often quite severe, occurred in only 1.6% of the Mapharsen series and was very mild in character. The most feared reaction is hemorrhagic encephalitis of which there were 2 cases in the neoarsphenamine series (111 cases), one resulting fatally, and 3 in the Mapharsen series (330 cases), one being rather severe but resulting in recovery, and 2 mild cases.

The results of treatment in the New York series may well be summarized in the following charted summary. Series I with Mapharsen represents cases receiving less than 1000 mgs. in 5 days, and Series II received 1000 mgs. to 1200 mgs.

NEW YORK SERIES

	Neo.	Map. I	Map. II
Number of patients ---	97	138	99
Satisfactory	87 (89%)	109 (79%)	82 (83%)
Pending ---	4 (4%)	5 (3%)	9 (9%)
Unsatisfactory	6 (7%)	24 (16%)	8 (8%)

A meeting was called in New York City in April, 1940, to which representative syphilologists and venereal disease control officers were invited. The details of the continuous drip method of treatment were presented and the results discussed. Those interested and in position to carry on this work developed new centers for the further use of this method of treatment. One large group has consisted of the Central States Area of the Third District of the U. S. Public Health Service, where at least one center for such treatment has been developed in each state. The results reported by this group were summarized and presented at the meeting of the American Medical Association in Cleveland in June, 1941⁶. They parallel, in general, very closely those reported in the New York series. There had been a total of 5 fatal cases amongst 1800 patients receiving this treatment up to that time, giving an incidence of fatal reactions of approximately .3%. This work is being continued and data from several thousand cases will soon be available.

Various modifications of the original New York continuous drip method have been tried in different places throughout the country. We have developed our own modification in Detroit, of the slow drip method which consists of the administration of approximately 1.2 mgs. of Mapharsen per pound of body weight to a maximum of 180 mgs. in 1000 c.c.'s of 5% glucose solution. It is given by gravity (vaculiter) and requires 60 to 75 minutes for administration. The above dose is repeated daily for 5 days. It was thought that this method might compare favorably with the slower drip administration requiring less hospital service and, because of the relatively larger dose given in a shorter period of time, it was hoped that even though the total dosage was decidedly less (750 to 900 mgs.) than called for in the New York method, that its administration with-

in a period of 1 hour might prove equally effective. We have now treated approximately 430 patients by this method. We have had 1 case of toxic encephalitis with recovery and 1 case that terminated fatally. Our results as compared to the slow drip method may be expressed in the following chart using the expected failure rate calculated from our Cleveland report.⁶

Diagnosis	Expected Failure Rate	Detroit Series
Sero-negative		
Primary	11.5	0
Sero-Positive		
Primary	13.9	13
Secondary	17.4	27
All Diagnoses	13.9	18.3

We have had no failures in our Wassermann-negative primary cases. Our results have paralleled closely the New York series for Wassermann-positive primary cases, but have been decidedly inferior as far as secondary cases are concerned. This experience would indicate that there is definite need for larger dosage, at least, in cases of secondary syphilis. We have added bismuth to this treatment procedure beginning in July, 1941, and believe that with this addition our results will prove more satisfactory. This will be discussed later.

Another modification of intensive treatment has been the multiple injection method. This consists of giving by syringe technic (10 c.c.) a dose of 60 to 100 mgs. of Mapharsen once or twice daily and repeating this dosage daily until a total of 1200 mgs. has been administered. This method of giving intensive therapy has been reported by Thomas,⁷ of Bellevue Hospital, New York City; Schoch,⁸ of Dallas, Texas, and the Toronto group.⁹ A dose of 60 mgs. may be administered twice daily for 10 days; 100 mgs. twice daily for 6 days, or 100 mgs. once daily for 12 days. Dr. Schoch has even used the latter method for ambulatory clinic patients. Reports on extensive

use of this method are as yet not available. Dr. Thomas' report would indicate that the incidence of serious reactions is at least as high and probably higher than with the slow drip administration. Such methods are purely experimental and should not be considered as yet for general use.

Another modification of intensive therapy is the combined use of Mapharsen and fever therapy. Dr. Thomas,⁷ of Bellevue Hospital, has made a preliminary report on this method of treatment, and Dr. Simpson¹⁰ has also reported on the use of this method from the Miami Valley Hospital, Dayton, Ohio. No extensive reports are available with this method. Its use will require special hospital supervision and limit its availability. This method will warrant, however, further observation, and technical difficulties should not materially limit its usefulness should it prove safer and even more effective than other modifications.

One of the most interesting proposals has also been announced by Dr. Simpson,¹⁰ and calls for only 1 day of treatment. The method consists of administration intramuscularly of 4 grs. of bismuth salicylate before artificial fever therapy is begun. The patient is then placed in a fever cabinet and given continuous fever therapy for 10 hours with temperatures from 105 to 106 F. He is also given 180 mgs. of Mapharsen in divided dosage by syringe technic during the height of his febrile reaction. This is truly heroic and intensive treatment and by the combined use of fever, arsenic and bismuth may actually reduce our time of administration of treatment from 5-days to 1 day. Further reports on this method of treatment should be watched with interest.

At the present time, intensive therapy is being used, therefore, in several different forms. The slow, continu-

ous drip (New York City); the rapid drip (Detroit); the multiple injection (Thomas-Schoch); fever therapy plus multiple injections (Thomas-Simpson), and the 1-day fever-arsenic-bismuth method (Simpson). Experiences gained from the use of these methods would at least suggest that the aim of treatment should be the administration of approximately 1200 mgs. of Mapharsen in a 5 to 12-day period.

The addition of bismuth to this method of treatment is a recent, interesting development and it is hoped that by the addition of bismuth the effectiveness of the method may be further increased without increasing serious toxic effects and possibly permit of a reduction in the total arsenic dosage. For instance, with our Detroit method which only called for a dosage of 750 to 900 mgs. in 5 days, our results were decidedly inferior to the 1200 mg. dosage level, at least in secondary cases. Since July, 1941, we have been giving our intensive cases 3 injections of Lipobismol, 1 c.c. each (100 mgs. metallic bismuth) on the 1st, 3rd and 5th day of their intensive treatment and continuing with 1 injection at weekly intervals for 4 weeks following completion of their arsenic therapy. The period of observation is too short to reach any definite conclusions, but we have had practically no failures in the patients so treated. It is expected that bismuth will delay the period for either serological or clinical relapse, but our experience with patients observed for more than a year makes us feel that the addition of bismuth is going to very materially increase the efficiency of our method of treatment. We have not had a single case of toxic encephalitis since starting to use this method (200 patients), and this makes us feel that the addition of bismuth is not going to increase our incidence of toxic reactions. The addition of bismuth to the other methods of treat-

ment is also now being used and it is expected that equally enthusiastic reports will be received.

At best, such methods of intensive therapy will probably have a limited field of usefulness as far as the average practitioner and smaller venereal disease clinics are concerned. One very definite observation that these methods of treatment has proven to us is that Mapharsen can be given in larger and more frequent dosage than we formerly felt safe to use. There is urgent need to develop a simplified method that can be used with safety on ambulatory patients. Various attempts at such modifications are now being tried. Beginning in January, 1942, we started a method of treatment which we are now using on cases of early syphilis treated in the Social Hygiene Clinic of the Detroit Department of Health who are not selected for the 5-day intensive method. We call this our ambulatory intensive system. It consists of 3 injections per week of Mapharsen in dosage of .04 to .06 gm. depending on weight, for a total of 20 injections. A course of 8 injections of bismuth is given, the first 2 injections being given during the last 2 weeks of the first course of Mapharsen; 2 weekly injections for two weeks between Mapharsen courses, and 2 overlapping injections of bismuth during the first 2 weeks of the second Mapharsen course which consists of 10 injections of Mapharsen at the same dosage given twice weekly. This system calls for a total of 30 injections of Mapharsen and 8 injections of bismuth given in a total of 13-2/3 weeks. Our experience with cases treated by this method has been that it is tolerated quite satisfactorily. It is too early as yet to attempt appraising our results. More recently, I have had information that Dr. Eagle,¹¹ of Johns-Hopkins University, is using a similar method of treatment consist-

(Continued on Page 243)



Honor Roll



From Private Practice

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Stephen W. Ondash
 Donald Birmingham
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Geo. L. Ambrecht
 David D. Calucci
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Youngstown Hospitals' Internes

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Rose Vertucci
Virginia Frame
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Catherine Doyle
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Margaret M. Hogan
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Madaline Vrancich
Ellen Andre
Mary Louise Smith
Stella Sylak

We shall do our very best to carry each month the names of all medical professional people who are in any branch of Military Service. In order that we may miss nobody, will those who enter the service, and other members of the Society, please see that I am notified promptly? Furthermore, we at home would be delighted to have a word from you for the Bulletin. Won't you tell us about yourselves and as much as you can about your service?

CLAUDE B. NORRIS, Editor

Phone 37418

The Following Physicians Have Applied for Commissions

Allsop, W. K.
Askue, C. M.
Banninga, H. S.
Belmont, M. H.
Bennett, W. H.
Birch, J. B.
Bowman, B. M.
Brant, A. E.
Brandt, A. J.
Brody, E. R.
Brown, J. D.
Buchanan, J. R.
Burrowes, B. B.
Colla, Jos.
Coombs, F. S.
Deitchman, M.
Dulick, J. F.
Evans, W. H.
Fenton, R. W.
Fusco, P. H.
Goldblatt, L. J.
Golden, T. K.
Goldstein, M. B.
Goodwin, V. L.

Harvey, P. J.
Hatcher, W. F.
Herald, J. K.
Kirkwood, E. E.
Kocialek, M. J.
Kramer, G. B.
Kupec, J. B.
Levy, D. H.
Lewis, John
Lowendorf, C. S.
Mahar, P. J.
Maine, W. E.
Malock, L. J.
McCann, J. N.
McDonough, J. J.
McOwen, P. J.
McKelvey, G. M.
McReynolds, C. A.
Mermis, W. O.
Mermis, W. L.
Middleton, R. H.
Monroe, F. F.
Nardacci, N. J.
Neidus, M. W.

Nelson, G. G.
Noll, John
Odom, R. E.
Reed, L. K.
Reese, H. J.
Rosenfeld, Jos.
Rosenblum, M.
Rummell, R. W.
Russell, R. W.
Ryall, W. W.
Sedwitz, Samuel
Skipp, Wm.
Stefanski, C.
Stewart, W. K.
Sunday, M. J.
Szucs, M. M.
Tamarkin, Samuel
Vance, J. C.
Warnock, C. H.
Weller, L. W.
Weltman, E.
Wenaas, E. J.
Yarmy, M. M.
Zoss, S. R.

Dr. Forman---

Will Open the Autumn Season of Lectures

On

NUTRITION

Dr. Forman Writes:

"I am scheduled to appear before the Mahoning County Medical Society on September 15th. I plan to talk on Nutrition and I am wondering if you could effect an arrangement with the officers of the society by which the meeting is thrown open to the members of the Council and others in Youngstown area interested in nutrition. This has been done many other places and has added a great deal to the effectiveness of the meeting. In our address we try to simplify the whole question of nutrition so that anyone can understand and put it into practice."

—Jonathan Forman.

The Society will welcome members of the Nutrition Council and any others who may be interested.

September 15th, 8:30 P. M.

Youngstown Club

August

(Continued from Page 239)

ing, however, of 3 injections at weekly intervals of Mapharsen for 6 to 8 weeks on ambulatory patients. This method is to be tried both with and without combined bismuth therapy. His system is based on experience with experimental therapy on 2500 rabbits from which he concluded that the total curative dose of Mapharsen is approximately constant whether administered in a few days or several weeks and that the margin of safety between toxic and therapeutic dose is increased by prolonging the duration of treatment.

It is my belief that 2 methods of intensive therapy will develop from this program: the 5-day or even 1-day intensive method requiring hospitalization and special supervision, and an ambulatory method giving 3 injections of Mapharsen weekly for at least 1200 mgs. and probably combined with bismuth.

I have not discussed details of technic, management or reactions in this review. Reference should be made to the literature for such information before any physician should attempt to use intensive therapy. I have simply tried to present a short summary of the present status of intensive treatment and some of the outstanding modifications being tried. Many patients who have had intensive treatment have been or will be seen at a later date by other physicians. Frequently such patients are subjected to further treatment by such physicians even shortly after intensive therapy has been completed, because their blood serology is still positive. In general, the rate of reversal depends upon the degree of positivity (quantitative) of the serology at the start of treatment or on the duration of the infection. Strongly positive cases of primary and secondary syphilis usually require from 3 to 6 or more months for their serology to reverse to flatly negative

while less strongly positive cases of early primary syphilis tend to reverse in 1 to 3 months. Therefore, a positive serologic test on a recently treated case does not indicate failure or call for further treatment on this basis alone. The critical time for clinical or serological relapse is between the third and ninth months and has usually been preceded by a dropping titre serologic test to either negative or only slightly positive. A quantitative serologic test is desirable in following these cases. Such tests should be repeated at monthly intervals for at least the first year of observation plus a very thorough physical examination for any evidence of muco-cutaneous clinical relapse. Physicians following intensive treatment cases should consult the center at which the treatment was given, unless definite clinical relapse has occurred, before deciding on the further disposition of intensive treatment cases.

In conclusion, I would state that intensive methods of treatment must still be considered experimental. The potential hazard of at least short intensive courses makes it necessary to advise that they should not be attempted by physicians without extensive experience in the therapy of syphilis. Further information is being rapidly accumulated and it is expected that such experiences will permit the establishment of a definite procedure to be recommended in the near future for more extensive use in private practice and in the military services.

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HER FIELD OF ENDEAVOR

Junior—My, what a pretty, new coed we have this term! Is she going out for athletics?

Soph—No, athletes.

July 14, 1942.

Dr. Claude B. Norris,
244 Lincoln Avenue,
Youngstown, Ohio.

Dear Claude:

I want to compliment you on your article in the Bulletin. It is well timed.

It is well to publish an honor roll of those men who are in the service. Some of the men who are in the service, and others who are not in yet, are questioning the status of men who are remaining here. I believe, as you do, that it would be a good plan to publish the names of those men who have filed applications for commissions either in the Army or Navy. It is my belief that the medical men of this county have responded to the present emergency in a magnificent manner.

With kind personal regards, believe me,

Sincerely yours,

Joe Rosenfeld.

EXPANSE

What depth have skies of youth! How deeply blue
Was that warm summer sky to him who lay
And watched the white clouds slowly sail away
While he in carefree fancy would pursue
Them to their mystic bourn; and as they flew,
The varied shapes of shade in disarray
Would creep across that pathless field while they
As well moved on to keep the rendezvous.

The skies still arch above that magic field,
Still may be found what these and clouds can yield
While blending shadows join life, earth and star;
And more may there be found than he discerned
Who thought he saw so much but later learned
That 'tis through darkness that we see afar.

Warren Deweese Coy

A SYMPOSIUM ON POLIOMYELITIS

(Infantile Paralysis engages our attention at this season. We have, therefore, "lifted" the following articles from the Pittsburgh Medical Bulletin, and we hereby make our acknowledgement.—Editor)

The Symptoms of Acute Poliomyelitis

H. T. PRICE, M. D.

Member, Poliomyelitis Research Committee, A. C. M. S.

In a well developed case of poliomyelitis it is practically impossible to err in diagnosis. This disease has a seasonal incidence which is outstanding. It usually is first noticed after a period of intense heat and generally, if epidemic, has an abrupt decline with the appearance of cold weather or a frost.

As with most infectious diseases it is extremely difficult to make a positive diagnosis during the prodromal stage.

Through the success of preventive measures in reducing to a minimum the gastrointestinal diseases during the summer months, poliomyelitis is no longer masked by these conditions and an earlier diagnosis should therefore be made.

In the most frequent form of this disease the following symptoms are most prominent: (1) Initial vomiting which is not frequently repeated. (2) Fever which may reach 103° or go even higher in severe cases, but which ordinarily does not last more than three or four days. In fact, it may disappear before definite paralysis is observed. (3) Drowsiness, headache, irritability and prostration are seen in most cases. (4) After the first day evidences of meningeal irritation appear, namely, hyperesthesia, pains in the extremities, especially in the legs, stiffness of the neck muscles and the spine; and great pain is elicited on motion of the affected parts. (5) The most valuable diagnostic measure is the examination of the spinal fluid. The pressure is usually increased and an increased number of cells is observed. The usual number is 50 to 100, at first chiefly

polymorphonuclear cells, but soon nearly all are lymphocytes. Under these conditions the fluid is clear; but if 1,000 cells are present the fluid becomes cloudy. The globulin is always increased. Paralysis usually appears on the third day of the disease. Sometimes it is the first symptom noted, and in other cases it may be delayed as long as a week. The loss of power may come on quickly, but more often it appears gradually and may extend for two or three days before it is fully developed. During an epidemic of this disease various degrees of involvement are noted, from abortive cases which subside rapidly with no evidence of paralysis, to those terrific fulminating cases which end in death within twenty-four hours.

Diagnosis: The diagnosis of acute poliomyelitis before the appearance of the paralysis is impossible except by examination of the spinal fluid.

No age is exempt from this disease. There is no successful method of immunization against this disease. At present there is no specific treatment. Early diagnosis and immediate symptomatic treatment are the best weapons in our fight against this baffling disease.

Present-Day Concepts of the Epidemiology of Infantile Paralysis

OLIVER E. TURNER, M. D.

Secretary, Poliomyelitis Research Committee, A. C. M. S.

Epidemiology has been defined in the past as "the sum of what is known regarding epidemics," but the modern streamlined definition refers more appropriately to an intricate

study of methods of disease-spread from one infected individual to another, linking together all the minute details of disease transmission. Thus, in our study of infantile paralysis we have attempted to unravel the mystery of the transmission, which yet remains a puzzle to the medical profession.

Generally, we have factual knowledge that the virus of poliomyelitis exists, because it has been visualized under the ultra-microscope, and even photographed under the electron microscope; we know that the virus is present in the discharges of most infected patients, especially in the secretions of the nose and throat, and in the feces; also we know that infected patients may indirectly or directly be carriers of the virus; but we *do not know* whether the virus is transmitted directly from person to person, or whether an insect or other members of the animal kingdom serve as the disease-carrier and reservoir of infection. Since it is a rarity to have secondary cases within a family group, we realize that probably the disease-spread is not essentially one of direct contact infection. Thus, the problems of how to institute control methods during an epidemic.

Evidence is accumulating at present to bear out the supposition that the virus of poliomyelitis enters the human body by way of the oropharynx and gastrointestinal tract, and that the virus is excreted through the same tract. In infected drainage zones, the sewage, privies, and polluted rivers all yield the virus when modern laboratory methods of virus recovery are used. Flies trapped in homes with infantile paralysis may be laden with the virus, and fish caught in virus-polluted waters have been found to have the virus in their intestinal tract. In spite of these facts, there is still a missing link in

the mysterious chain of poliomyelitis transmission, and further research must go on incessantly if we are to establish control measures against the disease-spread.

Through the medium of the Committee on Infantile Paralysis Research of the Allegheny County Medical Society, considerable local interest* has been aroused in studying the disease transmission in all cases occurring in Allegheny County during the past two years. Each case in Pittsburgh, and likewise in the county outside Pittsburgh, was thoroughly investigated clinically, and especially epidemiologically.

The interesting premise for the epidemiological study of poliomyelitis in Allegheny County hinges upon the unusual fact that we have had comparatively few cases in this area over a long period of time. Also, experience and statistics have shown that epidemics are relatively mild, and at irregular intervals of approximately 2-6 years. Since 1920 there have been only 545 reported cases of poliomyelitis in Allegheny County, with fairly even distribution of cases between the city and county area. In a period of twenty-two years, the annual average of cases for this large and populous area (1940-1,400,000) has been only 28; and five minor epidemics occurred in the years 1921, 1925, 1927, 1933, and 1939. Thus, one interesting problem of the Committee was to discover why this particular locality escaped larger numbers of cases and virulent epidemics which even neighboring communities suffered. The epidemic in Central Pennsylvania of some 300 cases in the summer of 1941 is a fitting example of this fact, when for the same summer only 23 cases were reported in this county. To index these local investigations of the past two years, every infected household was visited personally, a picture made of

* See July, 1942 issue of the Pennsylvania Medical Journal.

the house and terrain to determine drainage factors, the water and milk sources investigated, the type of sewage disposal system studied, and the fly and other insect prevalence noted. Many other problems were also considered, too numerous to mention in this brief discussion. Despite all attempts to provide positive facts in regard to the spread of the disease, the investigations of the Committee were found wanting for any reasonable or scientific conclusion of the disease-spread factors in this locality.

In the opinion of this writer, constructive information about spread-factors in poliomyelitis will not be forthcoming until: (1) all physicians with suspected or confirmed cases request the recovery of the virus in body secretions and excretions, with the purpose of eventually indexing the chief source of virus-contact for non-infected individuals; (2) all epidemiologists make the serious attempt of virus-recovery from all insects and other animals in the vicinity of homes with an infected case. Both of these ideas will become more practical in the near future, when proper laboratory culture of the poliomyelitis virus will be successful, and when all laboratories will have available the new electron microscope, which has already revolutionized our knowledge of the structure of bacterial and virus bodies.

Poliomyelitis—Several Sources of Infection

PHILIP E. MARKS, M. D.
Member, Poliomyelitis Research
Committee, A. C. M. S.

Poliomyelitis, as it occurs in Pittsburgh and as a matter of fact, throughout the world, presents many perplexing problems of particular interest to the clinician, the research worker and the epidemiologist. Solutions, as least for some of these problems, must be found before effective control measures can be developed.

A brief summary of the more important epidemiological features of this disease shows that:

1. Poliomyelitis is caused by a specific virus which can be demonstrated in the nose and throat secretions of all paralytic patients, most abortive cases and many healthy contacts to the infection.

2. Until a short time ago most observers considered the naso-pharynx as the only portal of entry and that the disease was an infection spread from person to person by direct contact.

3. The recent discovery by Paul and Trask, however, of substantial quantities of virus in bowel excretions and sewage again suggests the likelihood that poliomyelitis must be considered a gastrointestinal infection and that water, milk and other food stuffs as well as insects must be considered as possible agents in transmitting the disease.

4. Eighty per cent of cases occur under the age of ten years—boys more frequently than girls.

5. The disease occurs principally during the summer months—July, August and September; and the vast majority of cases develop before the approach of cold weather. Sporadic cases do occur in every month of the year.

6. The disease is more prevalent in homes surrounded by a rural-like environment than it is in the more densely congested sections of the city.

7. It is only the exceptional individual, who is exposed to the infectious agent, that develops the clinical disease.

8. There appears to be a widespread immunity which is directly proportional to the age of the individual. Secondary cases rarely develop in the immediate family, although multiple cases have been reported at times. It is rarely pos-

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August

sible to trace the infection from any particular patient to another known case.

9. The paralysis which characterizes the majority of reported cases is only a symptom of this most unusual infection.

10. Abortive cases are much more frequent than has been generally supposed and must be considered a factor in the spread of the malady.

11. Social and economic conditions influence in no way the incidence of this dread disease, since rich and poor alike fall victims to the virus and with equally tragic results.

12. Quarantine procedures are of little avail in curbing the epidemic.

13. These facts and figures have resulted from an analysis of the 504 reported cases in this city throughout a period of 30 years (1911-1941 inclusive), and they emphasize again the necessity for continued intensive study by physicians, research workers and epidemiologists; at the bedside, in the laboratory, and in the field.

Physical Treatment of Acute Poliomyelitis

JESSIE WRIGHT, M. D.
Member, Poliomyelitis Research
Committee, A. C. M. S.

Experience during the past year leads us to believe that early physical treatment started as soon after diagnosis as possible has definite beneficial effect.

I. Hot moist fomentations applied over the spine and all affected parts, temperature 130° F., changed six times daily, give sedation and decongestion.

A. Sedation is attained by reducing the number of irritating sensory afferent impulses reaching the nervous system and registering as pain. Nerve endings in skin are "water-soaked," giving sedation in a similar way to that attained by the continuous bath.

B. As pain subsides, the patient and the muscles relax, allowing waste products from metabolism of the muscles in spasm to be mobilized by improved circulatory cycle, thus relieving another cause of soreness and tenderness in muscles that have suffered from reflex spasm and residual muscular hypertension from pain and circulatory stasis.

C. With improved circulatory interchange brought about by dilation of the capillary bed in the skin network and by facilitation of blood flow through muscles which have relaxed after being in spasm, stasis in all tissues is relieved and it is logical to expect limitation of excessive congestion in the spinal cord and its membranes, thus favoring relief from edema and inflammatory pressure in cells surrounding those which have received a primary insult from invasion of the virus of poliomyelitis.

II. Careful turning of the patient and use of the prone position favor limitation of excessive congestion in the chest, central nervous system, and muscles.

III. As the patient becomes more comfortable and peripheral manifestations of acute inflammation subside, range of motion without pain is such that careful synchronous movements for proprioceptive training may be started. At this stage, muscles whose function has been temporarily inhibited by spasm of antagonists will tend to enter into the rhythm of synchronous movement through stimulation of proprioceptive nerve endings in synovial membrane, ligaments, tendons, and muscles. One should remember that muscles which have appeared inert early after onset may respond in the above manner only if their motor units have not been permanently impaired by direct insult of the virus.

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IV. When voluntary contraction of affected muscles no longer causes pain, active exercise may be started to encourage reciprocal action in a manner similar to the alternate rhythm of balanced bodily movement. Individual muscle response may be favored by emphasis of one phase of a balanced cycle.

V. Prevention of early tendency to deformity may be accomplished by

A. Relief of muscular spasm.

B. Frequent alignment of the body at the time of application of fomentation and when therapeutic movements are supervised.

C. Alternation between prone and back lying, the prone position being used every other two hours or 12 hours out of 24.

D. Keeping feet near right angle by foot board when back lying or by having feet over the end of the mattress when prone lying.

E. Ply board under the mattress or a firm hospital mattress to give uniform support and to prevent sagging of any part of the body.

F. Rolled or folded cotton blankets or sandbags to give local support as indicated in each patient.

Keeping the bowels open each day helps to relieve intraspinal pressure and is an adjunct in relieving general soreness. Since the virus is harbored in the intestines at the time of onset and for months afterward, another reason for regular elimination of this source of virus is evident.

A generous fluid intake dilutes toxins and flushes the urinary system, which has been shown to contain virus for varying periods of time.

A summary of the purposes of early physical treatment in acute poliomyelitis includes

I. Sedative and decongestive fomentations.

II. Judicious change of position at intervals to prevent passive congestion.

III. Proprioceptive movements.

IV. Reciprocal action emphasizing concentration and localization of patient's effort to favor muscles with individual weakness.

V. Routine alignment to prevent deformity.

VI. Protective postural positions in bed.

The above procedures make the patients comfortable more quickly than rigid rest with extensive splinting. Earlier movement is possible and all tissues show better tone and function, especially the muscles, joints, and skin.

Indications for Use of the Respirator

Not all poliomyelitis patients with difficulty in breathing can be helped with a respirator. Sometimes the use of the respirator may be harmful.

Poliomyelitis can prevent efficient respiration in three ways:

1. By actual paralysis of the primary respiratory muscles, the intercostals and the diaphragm, due to damage to the anterior horn cells of the cord. *Only in these cases is the respirator consistently helpful.*

2. By disturbance of the nerve centers in the medulla or bulb which presumably control the rate, rhythm and depth of respiration. *The respirator occasionally is of aid here.*

3. By the collection of mucus or vomitus around the glottis in patients with paralysis of the pharynx, causing constantly interrupted inspiratory efforts resulting in shallow, irregular, and ineffective respiration, and leading to extreme fatigue and respiratory failure. *The respirator is rarely effective and sometimes harmful in these cases.*

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THE BRIGHTER SIDE

By DAMON RUNYON

(Daily Mirror, Thursday, July 2, 1942)

Los Angeles, July 1—One of the least publicized, yet surely one of the most valuable of all soldiers in time of war is the Army doctor. His role lacks the dramatic flourish of the combatants yet without the doctor the fighting men would be out of luck. My remarks also apply, of course, to the Navy doctor.

Few realize, perhaps that this war calls for thousands of doctors. They must be men thoroughly qualified in their profession which as you know takes years to learn. Almost any man can be made into a soldier or sailor with a little instruction but a doctor is developed only after long study and practice.

And the irony of military or naval service to a doctor is the fact that he becomes useful for that purpose just about as he has established himself in private practice and is commencing to make a living. Our armed forces require many medical men of experience and of considerable physical activity and that kind are usually men who are verging upon the recognition and success in their chosen field to which their long preparation entitled them.

Naturally there are numerous young doctors in the service or ready to join whose careers in private life are merely deferred by the war and who from an economic standpoint may be better off on the service salary than they would be struggling for a civilian start but it has been my observation that the average service doctor makes a greater sacrifice of opportunity on joining up than the member of any other class of professional men.

If the doctor has built up a good practice in a community he knows that the minute he is off to war it

will be absorbed by a fellow practitioner who may be no less patriotic but who for one reason or another remains behind. And in most cases that practice is generally lost forever to the war doctor and when he returns he has to start all over again.

I must say I have never heard a service doctor complain on this particular point which is also true of the service dental officers whose work is closely allied with that of the doctors but I have known many of both professions whose devotion to country has been at high cost to them in more ways than one.

In war the doctor's service is nearly always extremely hazardous. In sea battle his risk is exactly that of every other man aboard his ship with the difference that he must remain calmest of all. On land he often has to perform his delicate work close behind the fighting lines with the wounded coming into the dressing station by the hundreds and there too the doctor must preserve the poise of the hospital operating room, must function with unfaltering hand.

I have seen the medicos in the field with the shells falling around them and confusion everywhere except in their immediate presence and I have marvelled at their calm. I call it bravery of the highest type. It's not as difficult to be brave under the impulse of excitement as it is when excitement is exactly the emotion that must be restrained. I doff my lid to the service sawbones.

Nowadays the demands on the service doctors are greater than in any other war in history. We have "jumping doctors," who are on regular duty with the parachute troops and we have Army and Navy detachments that require doctors all over

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ANNUAL GOLF DAY

Spotty weather greeted the Doctors July 16th for their golf outing. Threatening skies in the morning developed a good downpour at noon, but the clouds cleared away early enough in the afternoon to permit the tournament to get under way. Clear weather then prevailed and a beautiful sunset cheered the weary club swingers home over the last water hole at the Youngstown Country Club.

Dr. Elmer Wenaas, Chairman for the day, showed the way with 40 out and 37 in, for a 77 over the tricky course; winning the Medical-Dental Bureau trophy prize of a beautiful traveling case. George McKelvey was second low gross with an 80, winning the Lyons Physicians Supply prize of a Lifetime Baumanometer. Dr. Herbert of the Youngstown Hospital had low score for internes and won the White Drug Co. prize of military brushes and comb in rich plastic material. Other internes prizes were won by Drs. Ziegler and Posner.

The door prize, a rich brown leather handbag donated by Earl B. Huffman, was won by Sam Tamarin. Prizes of golf balls were distributed to Drs. Brown, Harvey, Good-

win, Baker, Birch, Bunn, Gross, Hayes and Turner.

Sixty men were seated at the dinner following the match, many of whom were saying their farewells before going into service with the armed forces. Many faces were missing of those who had already gone. Prizes were distributed after the dinner by the genial Albert Alcroft with more than his usual burr. President Walter Stewart presided over the festivities and made a few appropriate remarks expressing the Medical Society's admiration for the men who were leaving their homes and practices to serve their country.

The usual informal fellowship and games followed the dinner, the members seeming loathe to end what may be the last big social gathering among the doctors for a long time.

J. L. F.

ALL CLEAR

A sailor called unexpectedly on his fiancée one night. He found her all dressed up in her best party frock. "That's the spirit," he told her. "No need to look so gloomy."

Just then the phone bell rang, and the sailor answered it.

"What?" he said. "Oh, yes—judging from the number of U-boats we've sunk, I should certainly think so." And hung up the receiver.

"Who was that?" asked the girl.

"Oh," he said, "just a fellow who wanted to know if the coast is clear!"

—From the Edinburgh Dispatch.

CONTRETEMPS

First Aviator: "Quick, what do I do now, instructor?"

Second Aviator: "Goodness, aren't you the instructor?"

SIGNS OF THE TIMES

Hopeful: "What do you have in the shape of automobile tires?"

Clerk: "Funeral wreaths, life preservers and doughnuts."

SINCE LAST MONTH

Dr. W. E. Maine attended the clinic at St. Louis and Indianapolis during July.

Dr. and Mrs. John R. Buchanan, Anoka Lake, have enjoyed a 10 day trip to Toronto and Loberough-on-the-Lake.

Dr. William D. McElroy left Friday, July 17th to join the U. S. Army Medical Corps, having received a commission as major.

Dr. Samuel D. Goldberg who has been in the Army Medical Corps for the last 18 months, was recently appointed a major.

Dr. Adolphus C. Marinelli has received a commission as captain in the U. S. Army Medical Corps, having left August 1st, for New Orleans, La.

Miss Elizabeth Hudock, formerly of Youngstown, has received a commission as second lieutenant and is stationed at Camp Polk, La. Miss Hudock is a graduate of the Youngstown School of Nursing.

Dr. Paul Kaufman left Tuesday, July 13th for Fort Benjamin Harrison where he will be a captain in the Medical Corps.

Dr. and Mrs. D. M. Rothrock spent a week end in Westport, Pa., having accompanied Mrs. Rothrock's sister home.

Dr. Oscar A. Axelson reported to Camp Grant, Ill., July 30th for active duty as a captain in the Army Medical Corps.

Dr. Lewis Shensa reported July 30th at Fort Wood, Mo., as a first lieutenant.

Dr. L. G. Coe left July 26th to spend six weeks at the Cook County Hospital, taking a Postgraduate course in Cystoscopy and Genitourinary Surgery.

"Dusk On the Monongahela"

Dr. M. P. Mahrer, of our Society, won a prize for his excellent water color, "Dusk on the Monongahela," shown at Atlantic City, June 8-12, the occasion, the Fifth Annual Exhibition of the American Physicians Art Association.

Mead Johnson & Company, sponsors of these exhibits and donors of the prizes, deserve high praise from our profession for their constructive effort in developing the best in art as one of medicine's accomplishments.

WAR

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